

South Carolina Department of Health and Environmental Control
Office of Ocean and Coastal Resource Management
1362 McMillan Avenue, Suite 400
Charleston, South Carolina 29405

and

Charleston District, Army Corps of Engineers
69-A Hagood Avenue
Charleston, South Carolina 29403

September 20, 2013
Joint Permit Application Public Notice
City of Charleston, 2012-01119-2IU

The Department has received an application for a permit for the alteration of a critical area. The application was submitted pursuant to the Coastal Zone Management Act (Act 123) of 1977 South Carolina General Assembly. The application in brief, is described as follows:

- LOCATION:** On and adjacent to the marshes of the Ashley River adjacent to St. Andrews Boulevard, City of Charleston, Charleston County, South Carolina. TMS: N/A – Drainage Improvements.
- WORK:** The work as proposed consists of excavating and filling tidal wetlands. Specifically, the applicant seeks to improve drainage within the Forest Acres Drainage Basin. To accomplish the goal, the applicant seeks to excavate 0.08 acres of tidal wetlands and fill 0.04 acres in the form of riprap and articulated concrete mat at the outfall to the marshes. Proposed temporary tidal impacts due to construction will be 0.02 acres. The work as described is for drainage improvements. **PLEASE NOTE:** This project has freshwater jurisdictional wetland impacts as well; SC DHEC - OCRM will review these impacts concurrently under our Certification review process.

This public notice is being distributed to all known interested persons and agencies to assist in developing facts on which a decision by the Department can be based. Comments concerning the proposed work must be submitted in writing, setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition.

Comments regarding this application must be received by the Department on or before **October 20, 2013**. For more information, please contact **Jeff Thompson** at **843-953-0219** or via email at **thompsdj@dhec.sc.gov**.

- NOTE:** Plans depicting the proposed work are available and will be provided upon receipt of a written request or may be viewed on the Department website at **www.scdhec.gov/environment/ocrm/public_notice.htm**.

JOINT
PUBLIC NOTICE

CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A Hagood Avenue
Charleston, South Carolina 29403-5107
and the
S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
1362 McMillan Avenue, Suite 400
Charleston, South Carolina 29405

REGULATORY DIVISION

Refer to: P/N # [REDACTED] 2012-01119-2IU

September 13, 2013

Pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), Sections 401 and 404 of the Clean Water Act (33 U.S.C. 1344), and the South Carolina Coastal Zone Management Act (48-39-10 et.seq.) an application has been submitted to the Department of the Army and the S.C. Department of Health and Environmental Control by

The City of Charleston Department of Public Service
75 Calhoun Street, 3rd Floor
Charleston, South Carolina 29401

for a permit to excavate and place fill material in wetlands adjacent to

The Ashley River

at a location adjacent to St. Andrews Blvd. in Charleston County, South Carolina.
(Latitude: 32.79385 N, Longitude: -79.99174 W).

In order to give all interested parties an opportunity to express their views

NOTICE

is hereby given that written statements regarding the proposed work will be received by the **Corps** until

15 Days from the Date of this Notice

from those interested in the activity and whose interests may be affected by the proposed work.

The proposed work consists of excavation of 0.39 acres of freshwater wetlands and the placement of fill material in the form of box culverts, soil, and rip rap in 0.325 acres of freshwater wetlands. Additionally proposed is the excavation of 0.08 acres of tidal wetlands and the placement of fill material in the form of rip rap and an articulated concrete mat in 0.04 acres of tidal wetlands for a total tidal wetland impact area of 0.08 acres. Anticipated temporary impacts include 0.02 acres of tidal wetlands and 0.15 acres of freshwater wetlands due to equipment access. Equipment is proposed to be staged on timber marsh mats and temporary impact areas will be restored to grade and replanted if necessary.

The purpose of the proposed project is to improve drainage within the Forest Acres Drainage Basin by removal of an outdated pump station and performing culvert improvements outside of the permit area, ultimately connecting the Forest Acres Drainage Basin to the permit area through the redirection of stormwater. The proposed work within the permit area is to accommodate for the redirected stormwater by increasing the drainage easement's holding capacity and creating a gradient to facilitate drainage by gravity.

The applicant proposes to mitigate for adverse impacts to freshwater wetlands resulting from the placement of 0.325 acres of fill material by purchasing 2.6 credits from the Pigeon Pond Mitigation Bank. No mitigation is proposed for impacts to tidal wetlands due to the small permanent impact area (0.04 acres in the form of rip rap and an articulated concrete mat). It is expected that the majority of the excavated tidal area will naturally regenerate with native vegetation.

The District Engineer has concluded that the discharges associated with this project, both direct and indirect, should be reviewed by the South Carolina Department of Health and Environmental Control in accordance with provisions of Section 401 of the Clean Water Act. As such, this notice constitutes a request, on behalf of the applicant, for certification that this project will comply with applicable effluent limitations and water quality standards. The work shown on this application must also be certified as consistent with applicable provisions the Coastal Zone Management Program (15 CFR 930). The District Engineer will not process this application to a conclusion until such certifications are received. The applicant is hereby advised that supplemental information may be required by the State to facilitate the review.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Implementation of the proposed project would impact 0.08 acres of estuarine substrates and emergent wetlands utilized by various life stages of species comprising the red drum, shrimp, and snapper-grouper management complexes. Our initial determination is that the proposed action would not have a substantial individual or cumulative adverse impact on EFH or fisheries managed by the South Atlantic Fishery Management Council and the National Marine Fisheries Service (NMFS). Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

The District Engineer has consulted the most recently available information and has determined that the project will have no effect on any Federally endangered, threatened, or proposed species and will not result in the destruction or adverse modification of designated or proposed critical habitat. This public notice serves as a request to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for any additional information they may have on whether any listed or proposed endangered or threatened species or designated or proposed critical habitat may be present in the area which would be affected by the activity, pursuant to Section 7(c) of the Endangered Species Act of 1973 (as amended).

Pursuant to Section 106 of the National Historic Preservation Act (NHPA), this public notice also constitutes a request to Indian Tribes to notify the District Engineer of any historic properties of religious and cultural significance to them that may be affected by the proposed undertaking.

In accordance with the NHPA, the District Engineer has also consulted the latest published version of the National Register of Historic Places for the presence or absence of registered properties, or properties listed as being eligible for inclusion therein, and this worksite is not included as a registered property or property listed as being eligible for inclusion in the Register. To insure that other cultural resources that the District Engineer is not aware of are not overlooked, this public notice also serves as a request to the State Historic Preservation Office to provide any information it may have with regard to historic and cultural resources.

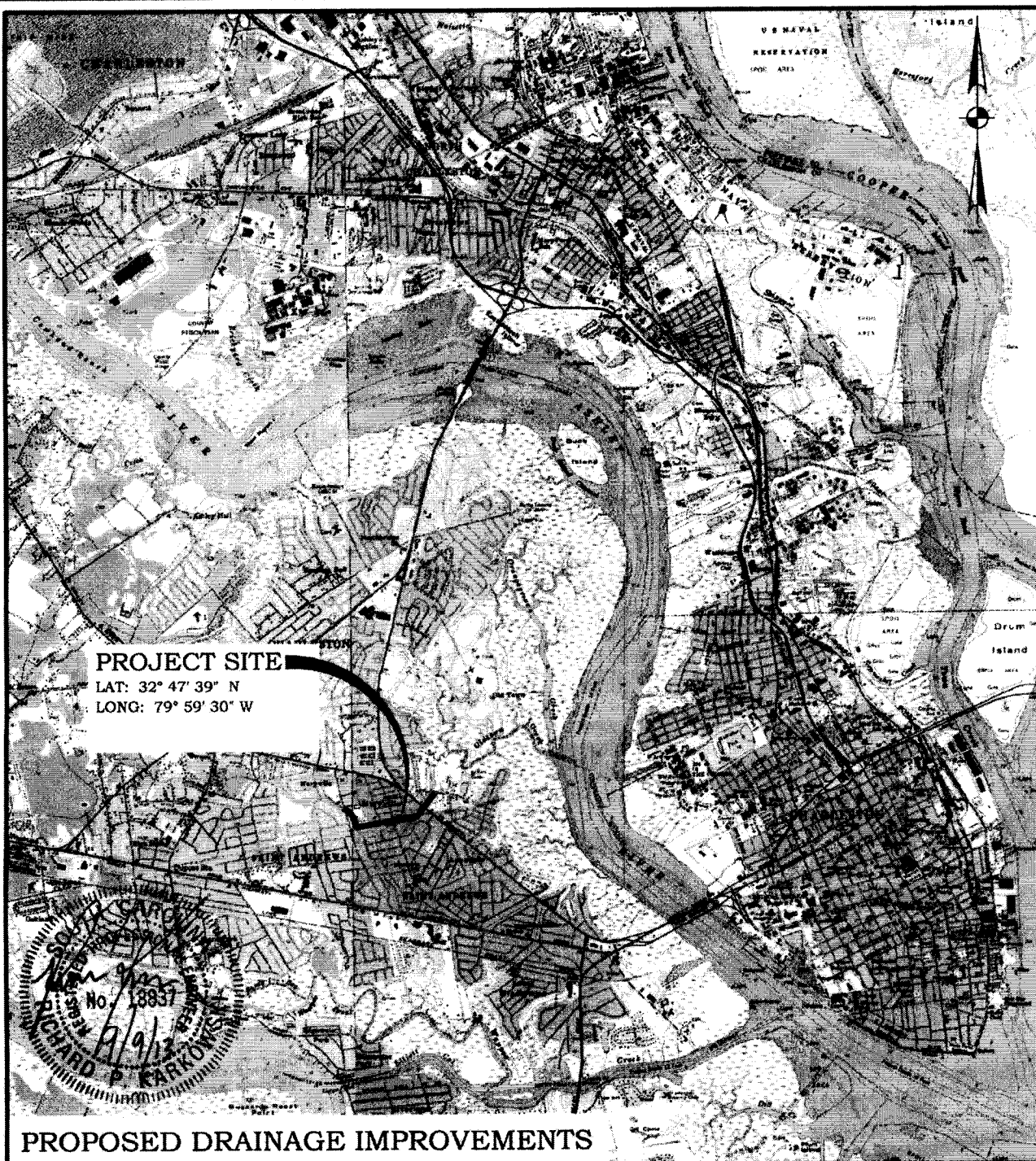
Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for a public hearing shall state, with particularity, the reasons for holding a public hearing.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the activity on the public interest and will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency (EPA), under authority of Section 404(b) of the Clean Water Act and, as appropriate, the criteria established under authority of Section 102 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the project must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the project will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. A permit will be granted unless the District Engineer determines that it would be contrary to the public interest. In cases of conflicting property rights, the Corps of Engineers cannot undertake to adjudicate rival claims.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

If there are any questions concerning this public notice, please contact Steven Currie at 843-329-8044 or toll free at 1-866-329-8187.

Jeff Thompson
SC DHEC - OCRM
Project manager
843-953-0219



PROPOSED DRAINAGE IMPROVEMENTS

QUADRANGLE MAP

CHARLESTON/JOHNS ISLAND QUADS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: SEPTEMBER 6, 2013

JOB NUMBER: J - 23595

SHEET: 1 OF 19

SCALE: 1" = 2000'



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Engineering | Surveying | Planning | GIS | Consulting

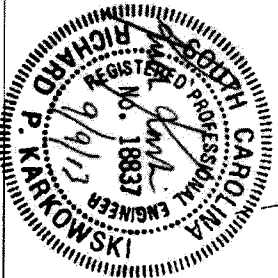
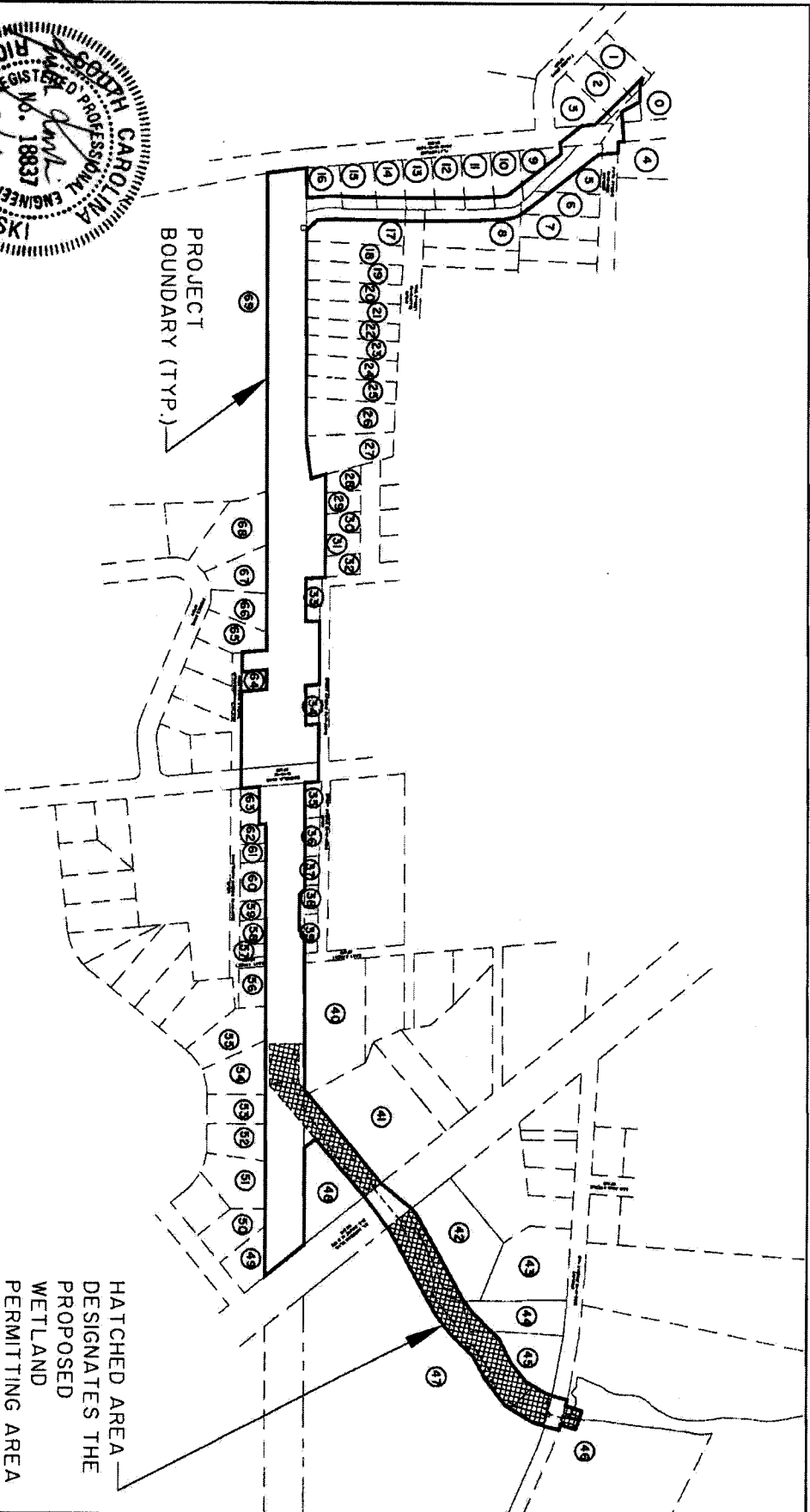
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LATITUDE: N32° 47' 39"
LONGITUDE: W79° 59' 30"

OVERALL PROJECT LOCATION EXHIBIT

PROPOSED ACTIVITY:

PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

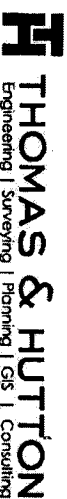
LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: February 12, 2013

JOB NUMBER: J - 23595.0001

SHEET: 2 of 19

SCALE: 1" = 400'



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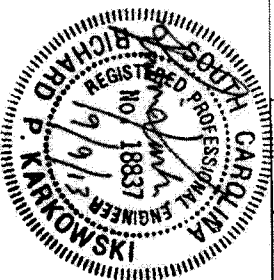
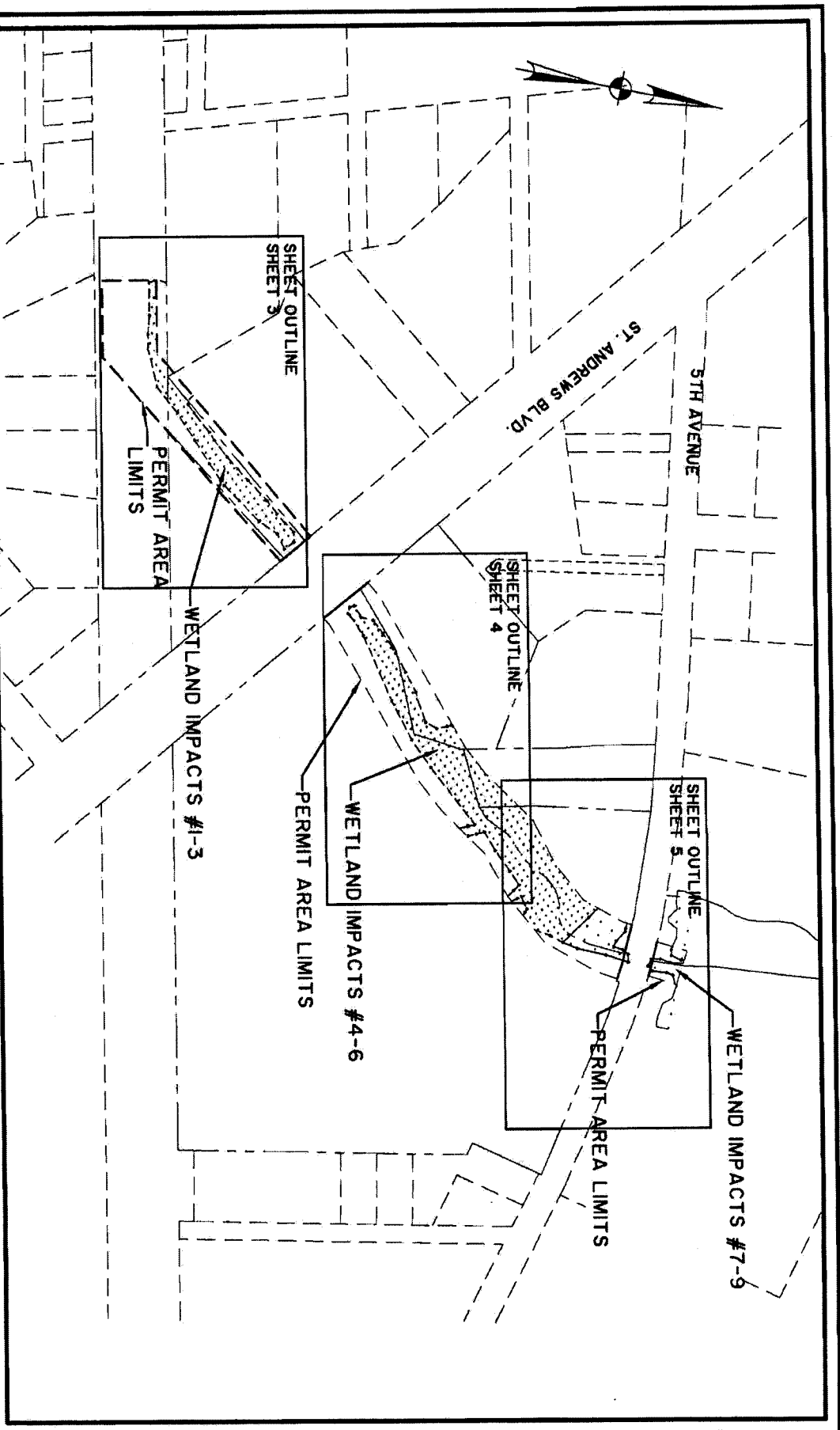
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36. Individually list wetland impacts including mechanized clearing, fill, excavation, flooding, draining, shading, etc. and attach a site map with location of each impact (attach additional sheets if needed).

Impact No.	Wetland Type	Distance to Receiving Water body (LF)	Purpose of Impact	Impact Size (acres)
1	Freshwater JD wetland	+/- 1,000	Drainage improvement	0.036
2	Freshwater JD wetland	+/-880	Drainage improvement	0.06
3	Freshwater JD wetland	+/-750	Drainage improvement	0.122
4	Freshwater JD wetland	+/-450	Drainage improvement	0.127
5	Freshwater JD wetland	+/-400	Drainage improvement	0.33
6	Freshwater JD wetland	+/-375	Drainage improvement	0.04
7	Saltwater JD wetland	+/-50	Drainage improvement	0.007
8	Saltwater JD wetland	+/-50	Drainage improvement	0.073
9	Saltwater JD wetland	0	Erosion control	0.02
			Total	0.83

RECEIVED
SEP 16 2013
DHEC-OCRM
CHARLESTON OFFICE



SHEET KEY MAP

PROPOSED ACTIVITY:

PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

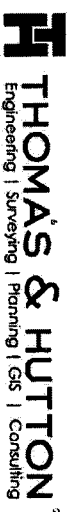
LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: February 12, 2013

JOB NUMBER: J - 23595.0001

SHEET: 3 of 19

SCALE: 1" = 200'



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
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PERMANENT IMPACTS

 FRESHWATER WETLAND - PROPOSED EXCAVATION (0.06 ac)
 FRESHWATER WETLAND - PROPOSED FILL (0.158 ac)
 (ACREAGE SHOWN IS FOR WETLAND IMPACTS #1-3)

EDGE OF PROPOSED BOX CULVERT

REFER TO SHEET 8
FOR SECTION VIEW OF
PROPOSED BOX CULVERTS
(INVERT EL: 0.44)

REFER TO SHEET 9
FOR PROFILE VIEW OF
PROPOSED CHANNEL
AND BOX CULVERTS

WETLAND IMPACT #2
EXCAVATION (AC) = 0.06
EXCAVATION (CYD) = 181

PROPOSED DUAL
8'X5' BOX CULVERTS

RIPRAP #1
FILL (AC) = 0.006
FILL (CYD) = 30

INVERT EL: 0.97

WETLAND IMPACT #1
FILL (AC) = 0.03
FILL (CYD) = 37

PROPOSED 36" CULVERT

EXISTING 36" CULVERT

REFER TO SHEET 7
FOR SECTION VIEW OF
PROPOSED CHANNEL

PERMIT AREA LIMITS

FRESHWATER WETLAND LIMITS

CONNECTION OF
PROPOSED WALL WITH
BOX CULVERT
PROPOSED 4' HIGH REINFORCED
CONCRETE RETAINING WALL

PROPOSED DUAL
10'X5' BOX CULVERTS

WETLAND IMPACT #3
FILL (AC) = 0.11
FILL (CYD) = 413

ST. ANDREWS BLVD.
SC ROUTE 61A (27)

WETLAND IMPACTS #1-3

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: February 18, 2013

JOB NUMBER: J - 23595.0001

SHEET: 4 of 19
SCALE: 1" = 50'

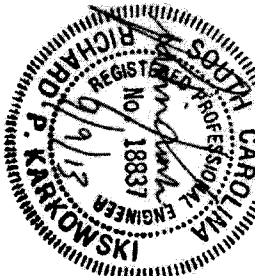
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TEMPORARY IMPACTS

FRESHWATER WETLAND (0.15 ac)

PERMANENT IMPACTS

FRESHWATER WETLAND - PROPOSED EXCAVATION (0.33 ac)

FRESHWATER WETLAND - PROPOSED FILL (0.167 ac)

(ACREAGE SHOWN IS FOR WETLAND IMPACTS #4-6)

SEE SHEET 5 FOR
A CONTINUATION
OF HATCHING

REFER TO SHEET 12
FOR CHANNEL
SECTION VIEW
(INVERT EL.: -0.6,
BELOW MSL)

REFER TO SHEET 13
FOR PROFILE VIEW
OF CHANNEL SECTION

RIPRAP #3
FILL (AC) = 0.017
FILL (CYD) = 60

WETLAND IMPACT #4
FILL (AC) = 0.11
FILL (CYD) = 404

REFER TO SHEET 11
FOR PROFILE VIEW OF
PROPOSED BOX CULVERT

PROPOSED DUAL
10'X5' BOX CULVERTS

REFER TO SHEET 10
FOR SECTION VIEW OF
PROPOSED BOX CULVERTS
(INVERT ELEV.: -0.39, BELOW MSL)

INVERT EL.: -0.57
BELOW MSL

PERMIT AREA LIMITS

WETLAND IMPACT #5
(CONTINUED ON SHEET 5)
EXCAVATION (AC) = 0.33
EXCAVATION (CYD) = 2.41

WETLAND IMPACT #6
FILL (AC) = 0.04
FILL (CYD) = 89

ST. ANDREWS BLVD.
(SC ROUTE 61 & 771)

WETLAND IMPACTS #4-6

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: February 18, 2013

JOB NUMBER: J - 23595.0001

SHEET: 5 of 19
SCALE: 1" = 50'

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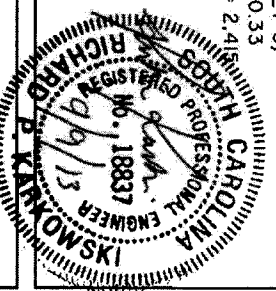
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TEMPORARY IMPACTS

CRITICAL AREA (0.02 ac)

FRESHWATER WETLAND

PERMANENT IMPACTS

CRITICAL AREA - PROPOSED EXCAVATION (0.08 ac)

CRITICAL AREA - PROPOSED FILL (0.04 ac)

FRESHWATER WETLAND - PROPOSED EXCAVATION

FRESHWATER WETLAND - PROPOSED FILL

REFER TO SHEET 16
FOR CHANNEL SECTION VIEW
(INVERT EL: -0.9
BELOW MSL)

REFER TO SHEET 15
FOR PROFILE VIEW
OF CHANNEL SECTION

REFER TO SHEET 14
FOR CHANNEL
SECTION VIEW
(INVERT EL: -0.8
BELOW MSL)

WETLAND IMPACT #5
(SEE NOTE 1, THIS SHEET)

ARTICULATED CONCRETE
BLOCK MAT
FILL (AC) = 0.02
FILL (CYD) = 50

WETLAND IMPACT #9
EXCAVATION (AC) = 0.02
EXCAVATION (CYD) = 167
SEE NOTE 2, THIS SHEET

SEE SHEETS 17 AND 18 FOR
PLAN AND SECTION VIEW OF
5TH STREET OUTFALL
IMPROVEMENTS
PROPOSED HEADWALL
(TYP BOTH ENDS)

PROPOSED DUAL 10'X5' BOX CULVERTS
INVERT ELEV: -1.00, BELOW MSL

RIPRAP #4
FILL (AC) = 0.013
FILL (CYD) = 50

WETLAND IMPACT #8
EXCAVATION (AC) = 0.06
EXCAVATION (CYD) = 492

WETLAND IMPACT #7
FILL (AC) = 0.007
FILL (CYD) = 27

WETLAND IMPACT #6
(SEE NOTE 1, THIS SHEET)

PERMIT AREA
LIMITS

FRESHWATER
WETLAND LIMITS

NOTES:

1. ACREAGE SHOWN IS FOR WETLAND IMPACT #7-9, SEE SHEET 4 FOR WETLAND IMPACT SUMMARY FOR #5 AND #6.

2. WETLAND IMPACT AREA #9 WILL BE EXCAVATED, AND A LAYER OF ARTICULATED CONCRETE BLOCK MAT (ACBM) WILL BE PLACED AS A "FILL" LAYER. REFER TO SHEETS 17 AND 18 FOR FURTHER INFO REGARDING THE ACBM LAYER. THE "EXCAVATION" HATCH IS NOT SHOWN FOR CLARITY PURPOSES.

WETLAND IMPACTS #7-9

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: June 24, 2013

JOB NUMBER: J - 23595.0001

SHEET: 6 of 19

SCALE: 1" = 50'

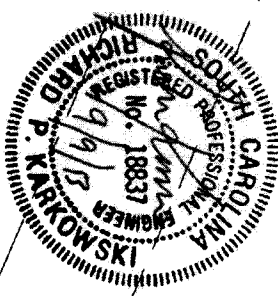
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PROJECT LIMITS ACREAGE 10.71 ac
 PERMIT AREA LIMITS ACREAGE 1.88 ac

TEMPORARY IMPACTS

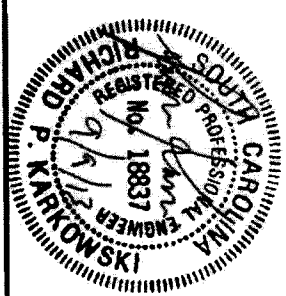
CRITICAL AREA 0.02 ac
 FRESHWATER WETLAND 0.15 ac

PERMANENT IMPACTS

TOTAL CRITICAL AREA IMPACT FOOTPRINT* 0.08 ac
 CRITICAL AREA - PROPOSED EXCAVATION 0.08 ac
 CRITICAL AREA - PROPOSED FILL 0.04 ac
 FRESHWATER WETLAND - PROPOSED EXCAVATION 0.39 ac
 FRESHWATER WETLAND - PROPOSED FILL 0.325 ac

RIPRAP IMPACTS

(INCLUDES ARTICULATED CONCRETE BLOCK MAT
 IN WETLAND IMPACT #9) 230 CYDS

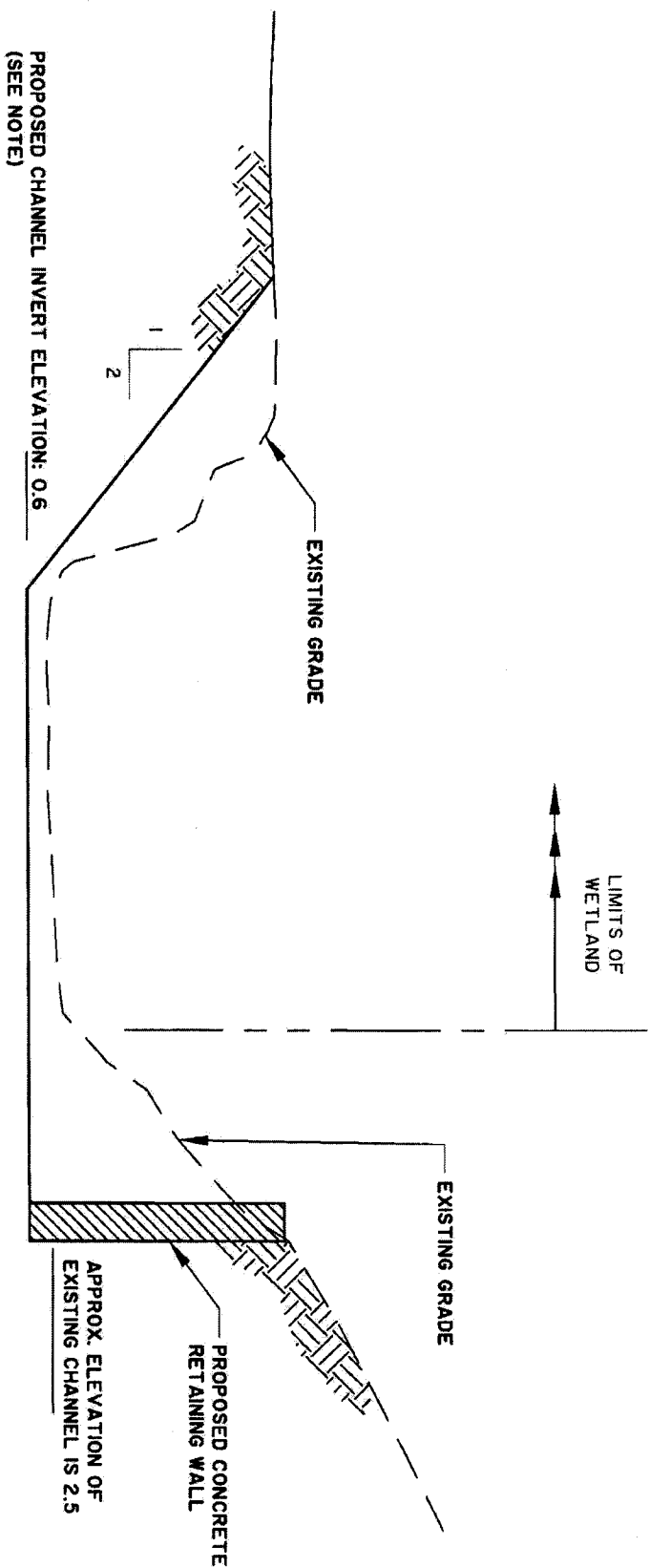


IMPACT SUMMARY

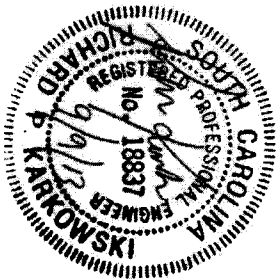
PROPOSED ACTIVITY:
 PROPOSED DRAINAGE IMPROVEMENTS
 CLIENT:
 CITY OF CHARLESTON
 LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC
 DATE: May 1, 2013 REVISED: Sept 3, 2013 SHEET: 7 of 19
 JOB NUMBER: J - 23595.0001 SCALE: NTS



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NOTE: ELEVATION SHOWN FOR LOCATION WHERE
SECTIONS ARE NOTED ON THE PREVIOUS
PLAN VIEW EXHIBITS.



SECTION VIEW OF POPOSED CHANNEL

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:
CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC
DATE: June 24, 2013
JOB NUMBER: J - 23595.0001

SHEET: 8 of 19
SCALE: NTS

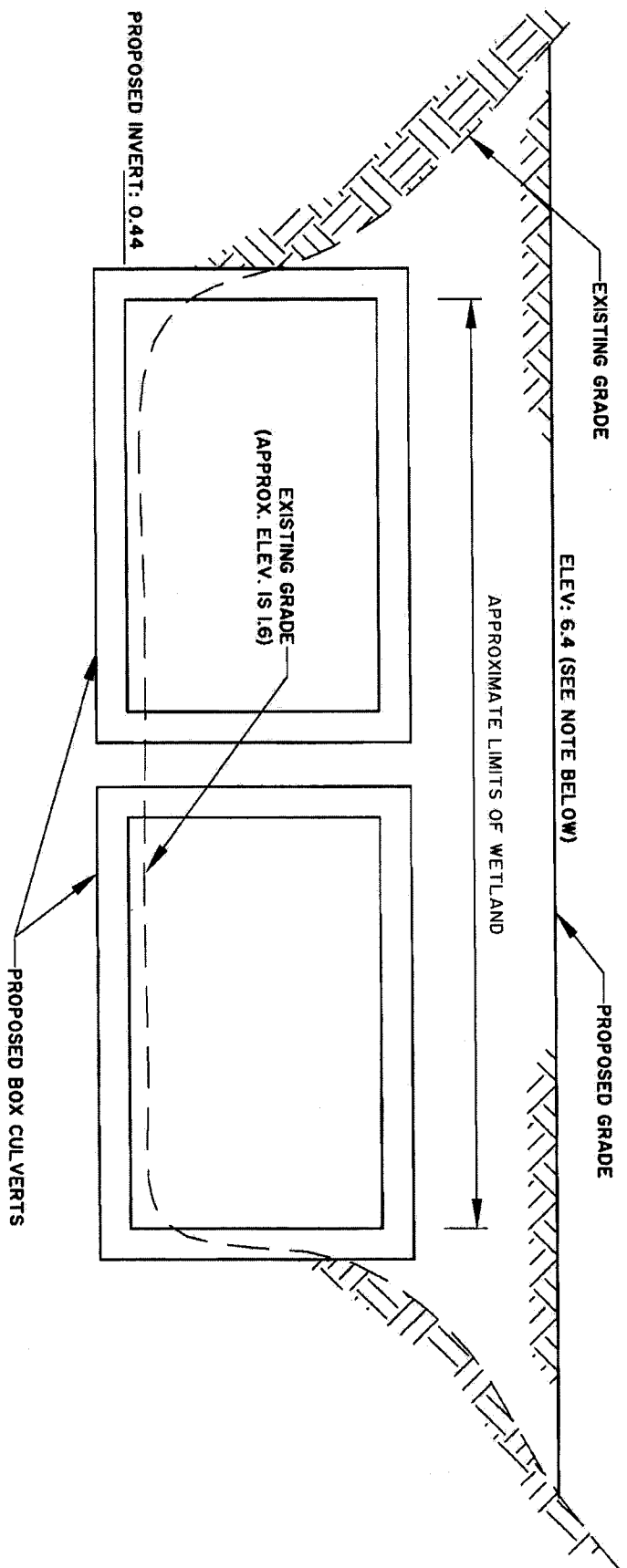


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NOTE: ELEVATION SHOWN FOR LOCATION WHERE
SECTIONS ARE NOTED ON THE PREVIOUS
PLAN VIEW EXHIBITS.

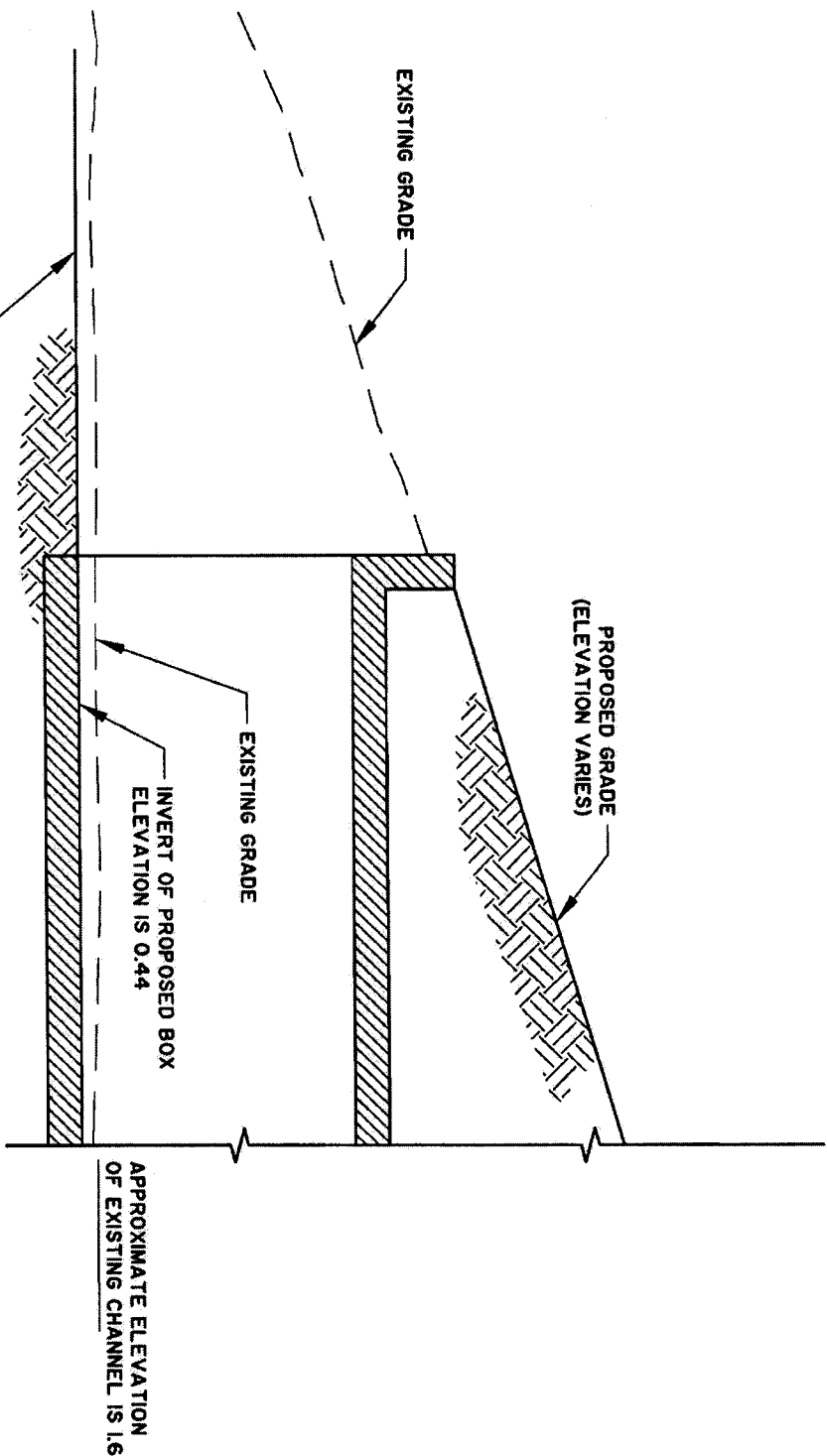
SECTION VIEW PROPOSED BOX CULVERTS

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS
CLIENT:
CITY OF CHARLESTON
LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC
DATE: May 1, 2013
JOB NUMBER: J - 23595.0001
SHEET: 9 of 19
SCALE: NTS

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NOTE: ELEVATION SHOWN FOR LOCATION WHERE
SECTIONS ARE NOTED ON THE PREVIOUS
PLAN VIEW EXHIBITS.

PROFILE VIEW AT CHANNEL/BOX CULVERT

PROPOSED ACTIVITY:

PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: June 24, 2013

JOB NUMBER: J - 23595.0001

SHEET: 10 of 19

SCALE: NTS

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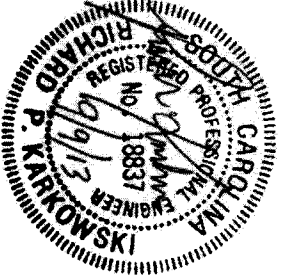
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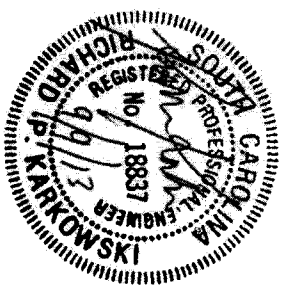
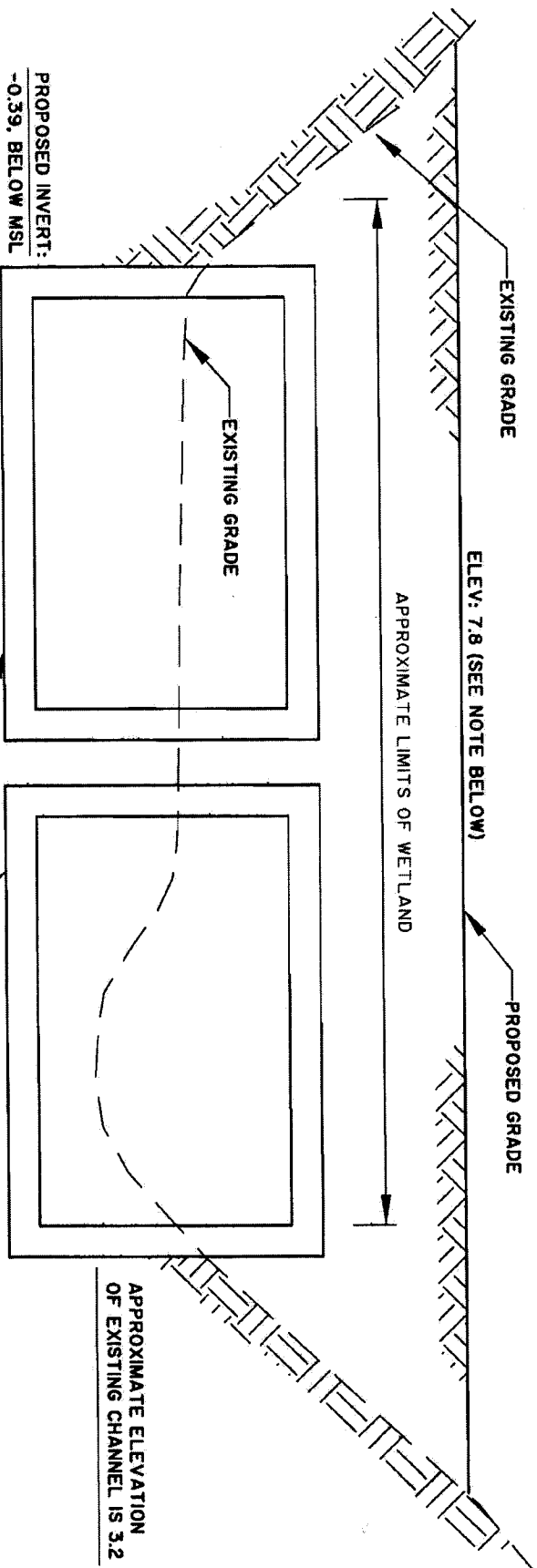


PROPOSED INVERT:
-0.39, BELOW MSL

NOTE: ELEVATION SHOWN FOR LOCATION WHERE
SECTIONS ARE NOTED ON THE PREVIOUS
PLAN VIEW EXHIBITS.

PROPOSED BOX CULVERTS

APPROXIMATE ELEVATION
OF EXISTING CHANNEL IS 3.2

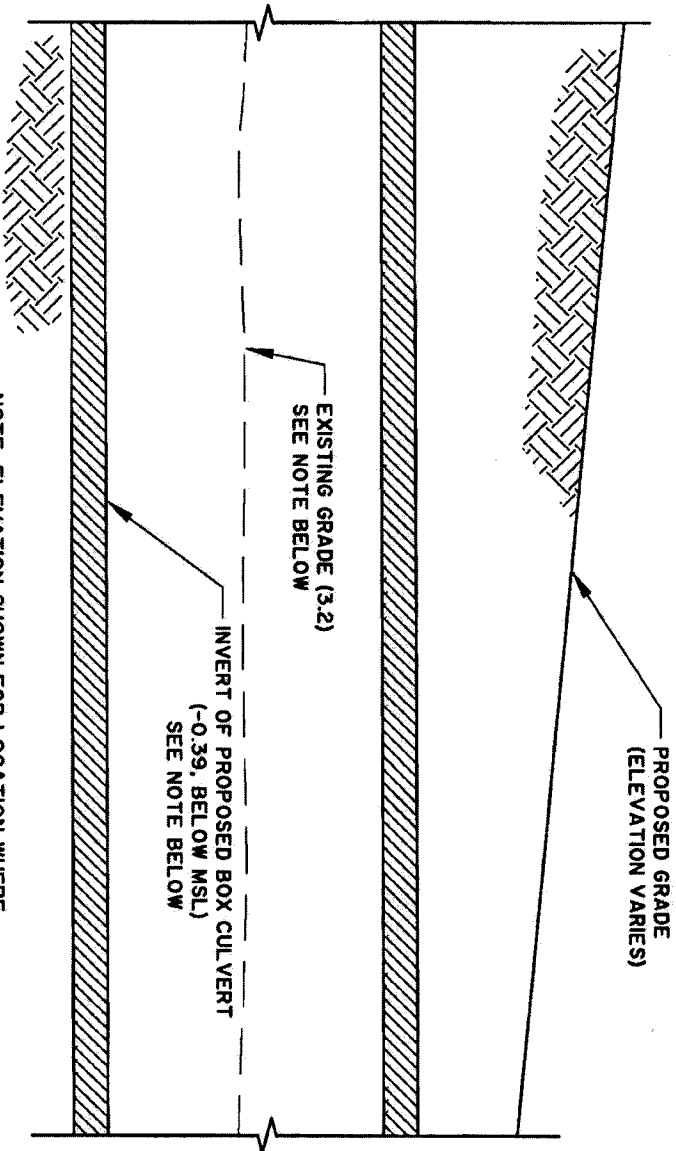


SECTION VIEW PROPOSED BOX CULVERTS

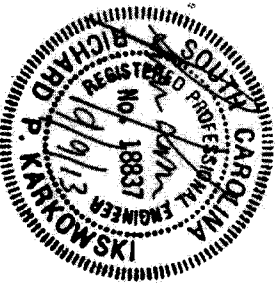
PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS
CLIENT:
CITY OF CHARLESTON
LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC
DATE: May 1, 2013
JOB NUMBER: J - 23595.0001
SHEET: 11 of 19
SCALE: NTS



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NOTE: ELEVATION SHOWN FOR LOCATION WHERE
SECTIONS ARE NOTED ON THE PREVIOUS
PLAN VIEW EXHIBITS.



PROFILE VIEW PROPOSED BOX CULVERTS

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: June 24, 2013

JOB NUMBER: J-23595.0001

SHEET: 12 of 19

SCALE: NTS



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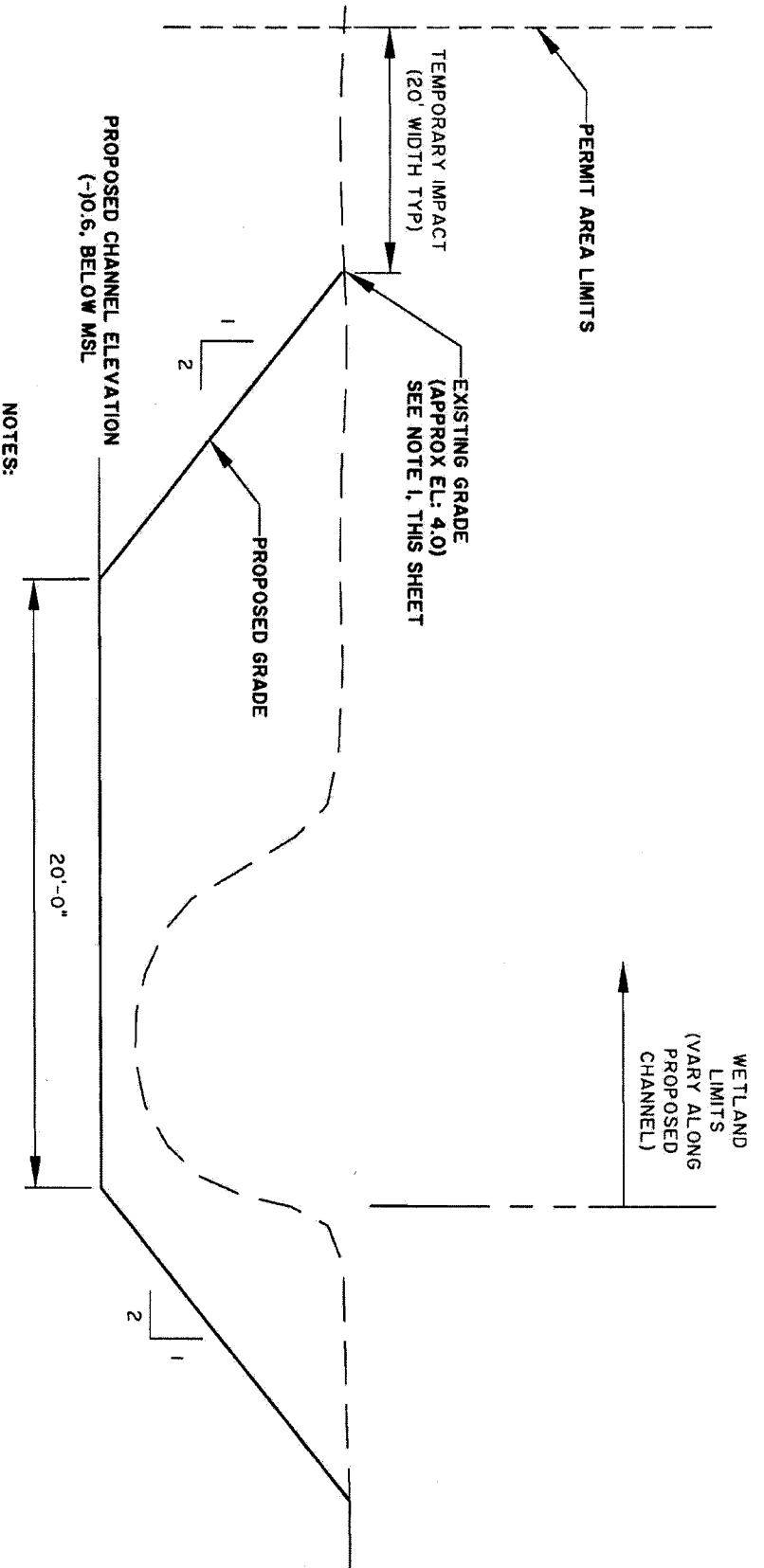
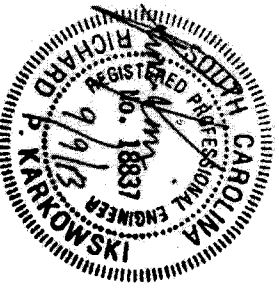
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NOTES:

1. TEMPORARY IMPACT AREA TO BE RESTORED TO EXISTING CONTOURS UPON COMPLETION OF WORK.
2. ELEVATIONS SHOWN ARE FOR THE LOCATION WHERE SECTIONS ARE NOTED ON THE PREVIOUS PLAN VIEW EXHIBITS.

SECTION VIEW PROPOSED CHANNEL

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: MAY 1, 2013

JOB NUMBER: J - 23595.0001

SHEET: 13 of 19
SCALE: NTS

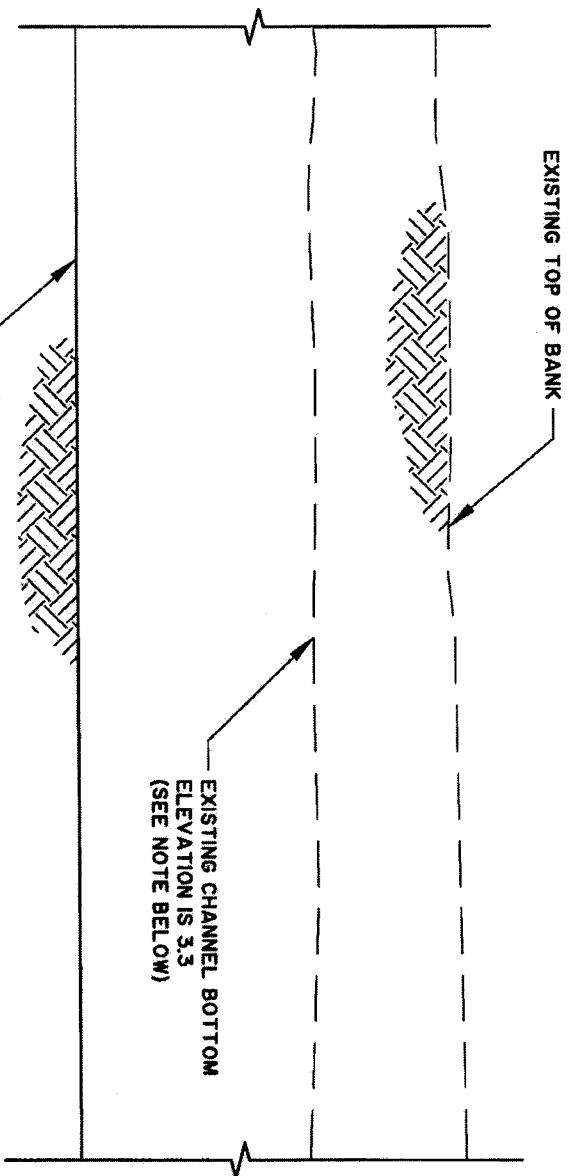


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NOTE: ELEVATION SHOWN FOR LOCATION WHERE
SECTIONS ARE NOTED ON THE PREVIOUS
PLAN VIEW EXHIBITS.

PROFILE VIEW AT CHANNEL SECTION

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: June 24, 2013

JOB NUMBER: J - 23595.0001

SHEET: 14 of 19

SCALE: NTS

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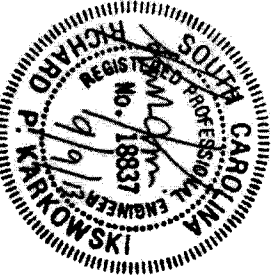
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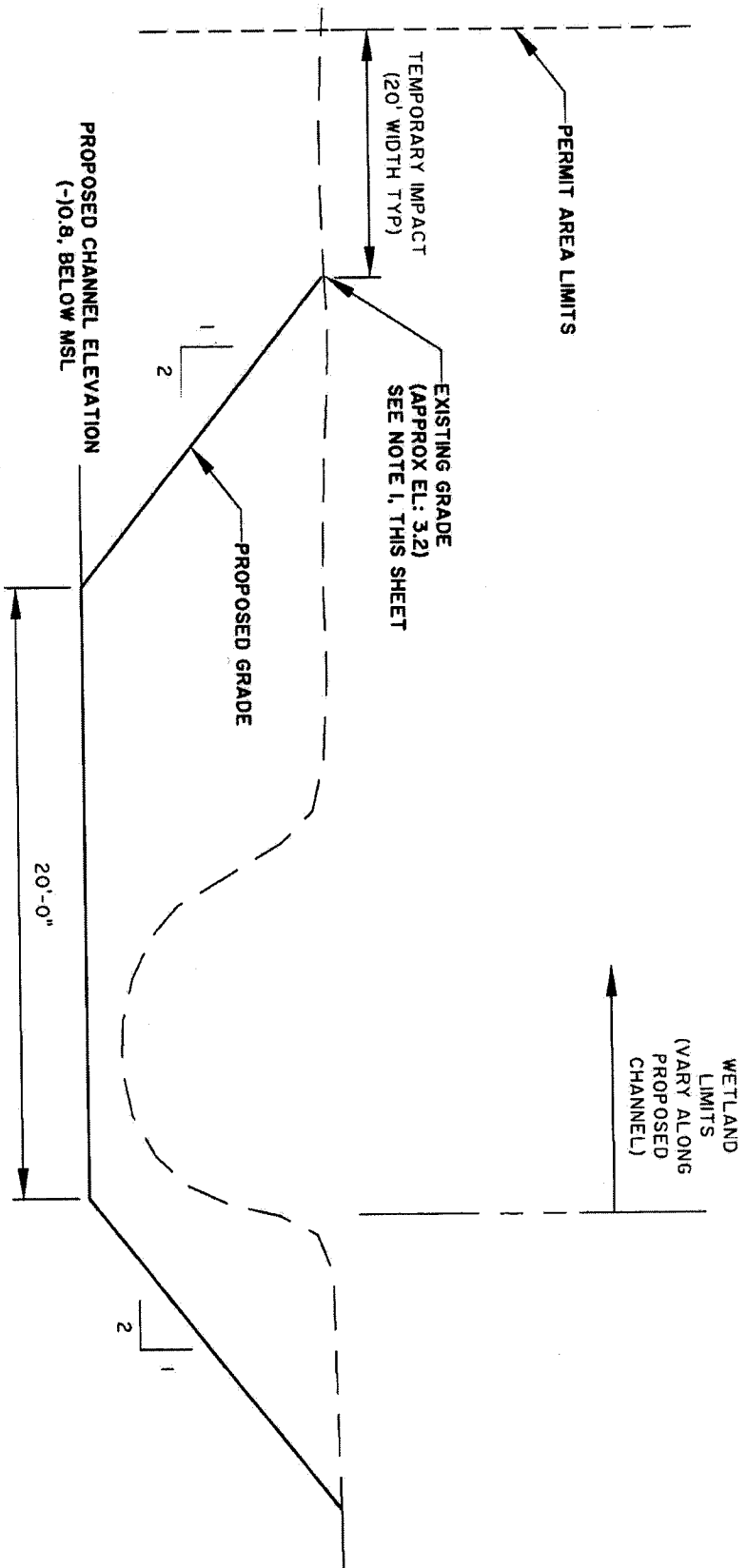
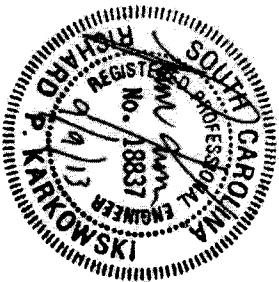
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NOTES:

1. TEMPORARY IMPACT AREA TO BE RESTORED TO EXISTING CONTOURS UPON COMPLETION OF WORK.
2. ELEVATIONS SHOWN ARE FOR THE LOCATION WHERE SECTIONS ARE NOTED ON THE PREVIOUS PLAN VIEW EXHIBITS.

SECTION VIEW PROPOSED CHANNEL

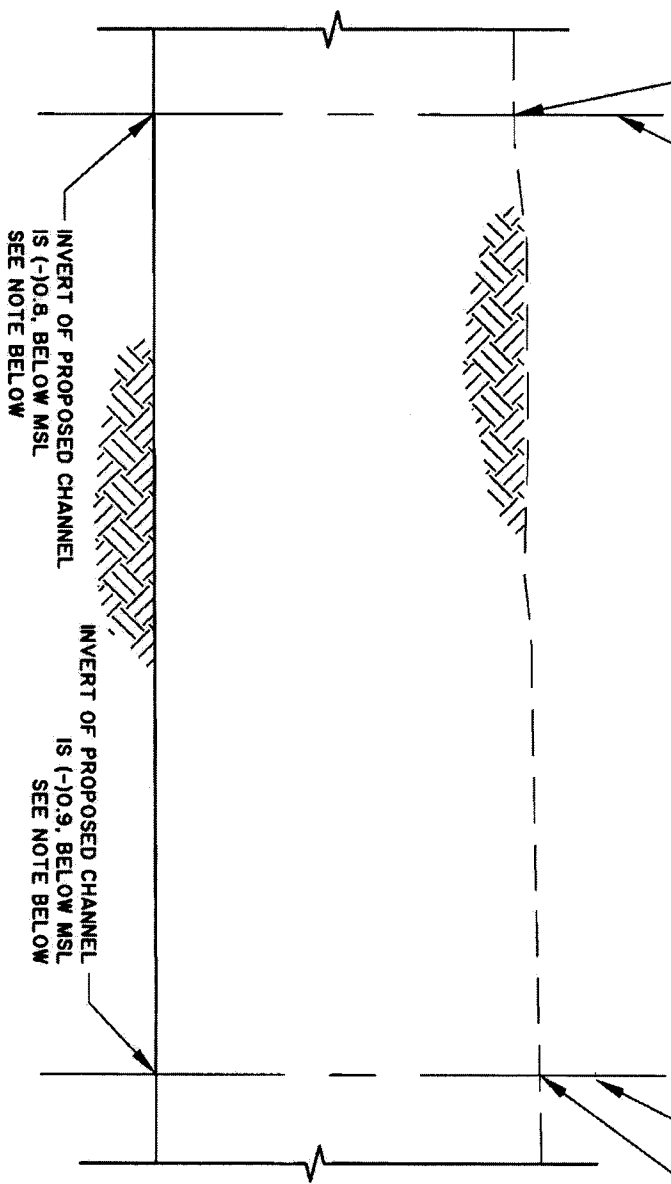
PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS
 CLIENT:
CITY OF CHARLESTON
 LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC
 DATE: May 1, 2013
 JOB NUMBER: J - 23595.0001



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REFER TO SHEET 14 FOR
SECTION VIEW

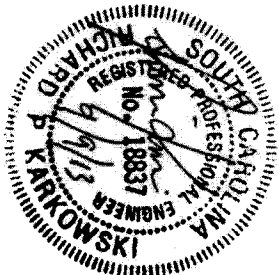
EXISTING GRADE EL: 3.2



REFER TO SHEET 16 FOR
SECTION VIEW

EXISTING GRADE EL: 3.3

NOTE: ELEVATION SHOWN FOR LOCATION WHERE
SECTIONS ARE NOTED ON THE PREVIOUS
PLAN VIEW EXHIBITS.



PROFILE VIEW AT CHANNEL SECTION

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: June 24, 2013

JOB NUMBER: J - 23595.0001

SHEET: 16 of 19

SCALE: NTS



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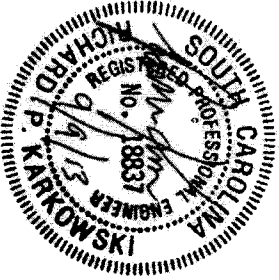
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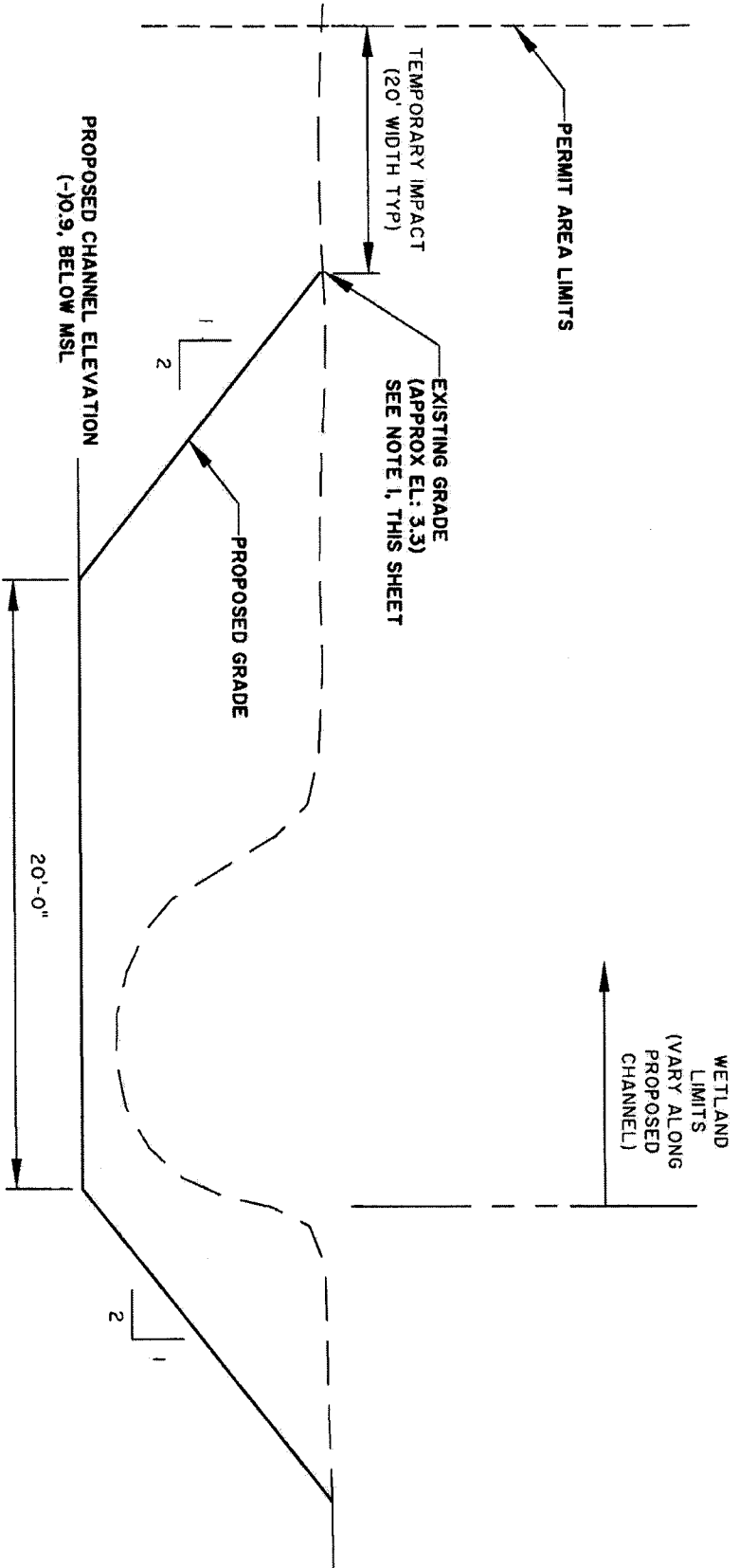
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PROPOSED CHANNEL ELEVATION
(-)+0.9, BELOW MSL

NOTES:

1. TEMPORARY IMPACT AREA TO BE RESTORED TO EXISTING CONTOURS UPON COMPLETION OF WORK.
2. ELEVATIONS SHOWN ARE FOR THE LOCATION WHERE SECTIONS ARE NOTED ON THE PREVIOUS PLAN VIEW EXHIBITS.



SECTION VIEW PROPOSED CHANNEL

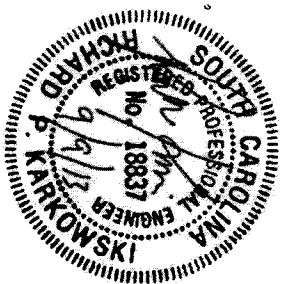
PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS
CLIENT:
CITY OF CHARLESTON
LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC
DATE: MAY 1, 2013
JOB NUMBER: J - 23595.0001
SHEET: 17 of 19
SCALE: NTS



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BLOW-UP VIEW PROPOSED 5TH AVE OUTFALL

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:
CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC
DATE: May 1, 2013
JOB NUMBER: J - 23595.0001

SHEET: 18 of 19
SCALE: NTS

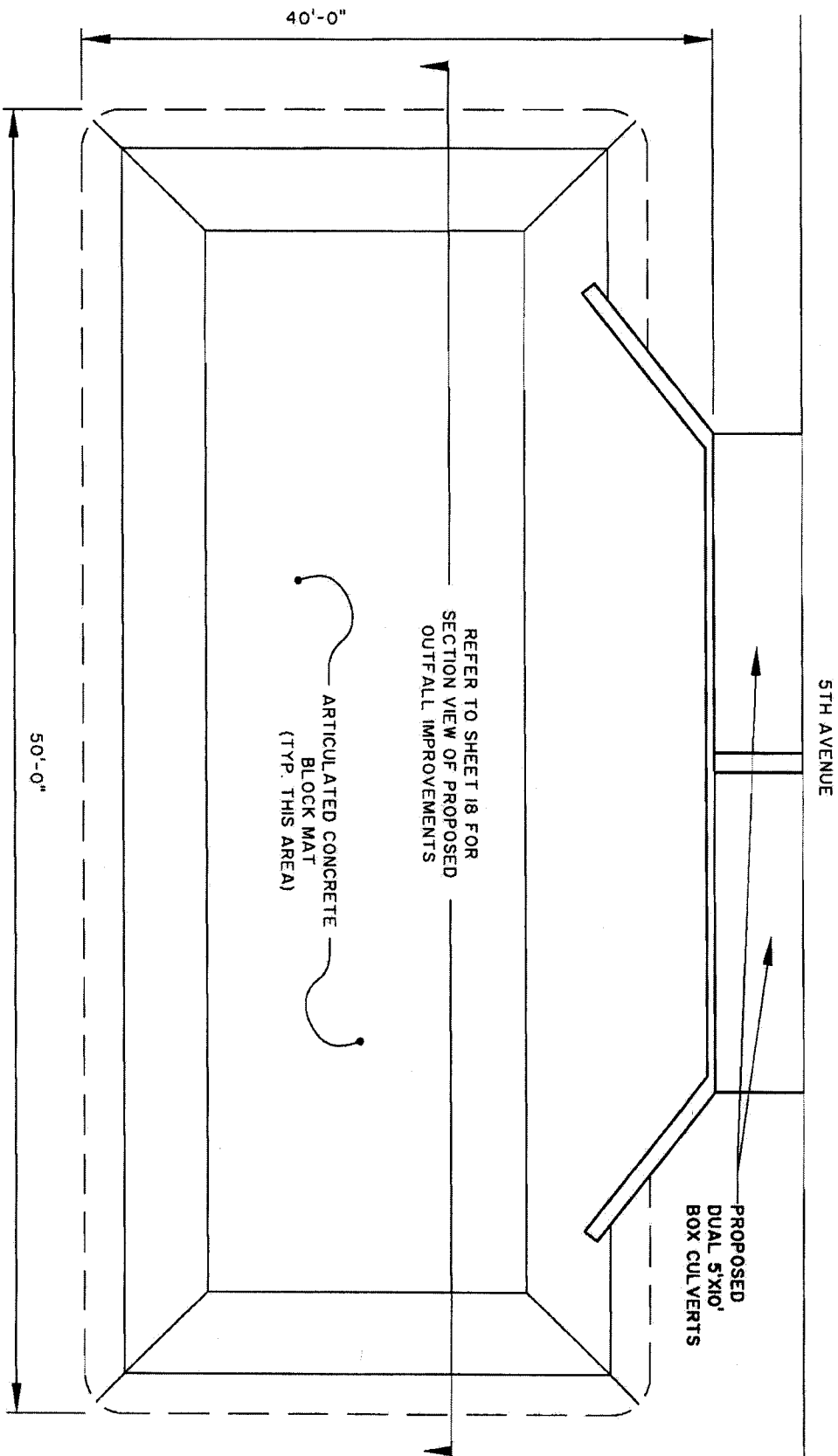


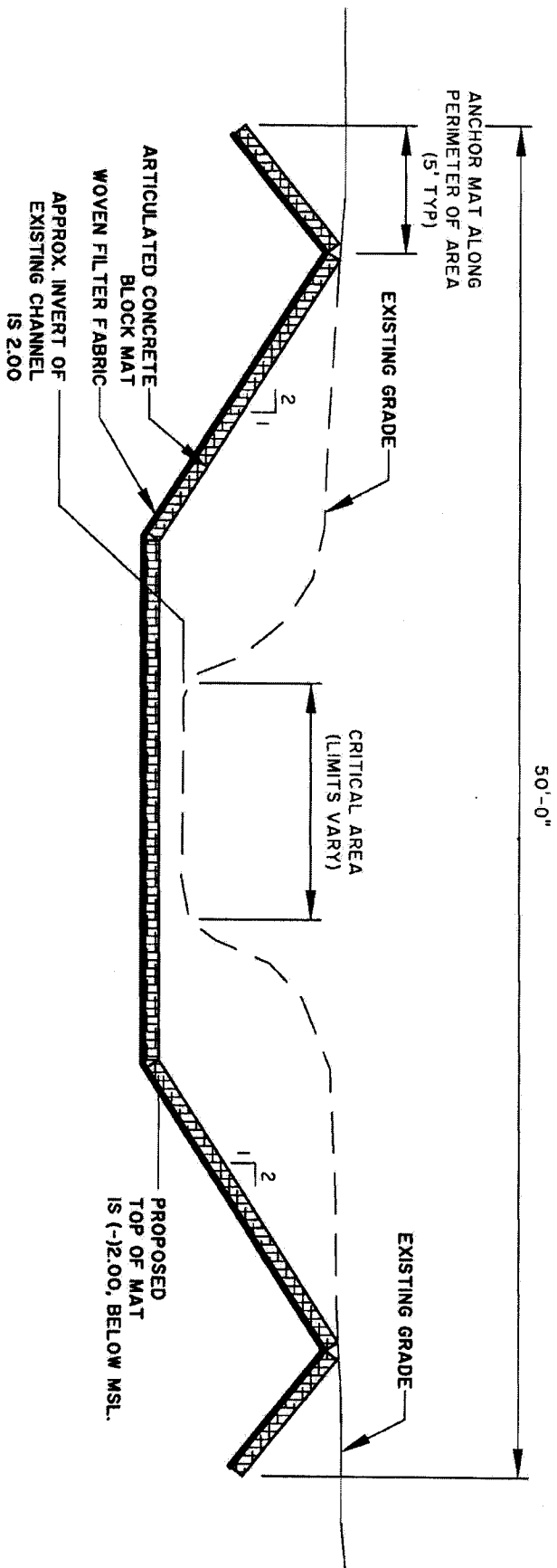
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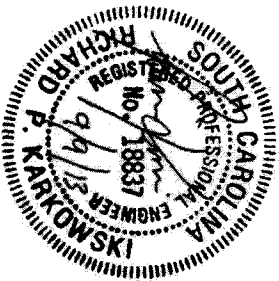
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NOTE: PROPOSED INVERT OF DUAL
10'X5' BOX CULVERTS (NOT SHOWN,
THIS VIEW) IS (-)1.00, BELOW MSL.



SECTION VIEW PROPOSED 5TH AVE OUTFALL

PROPOSED ACTIVITY:
PROPOSED DRAINAGE IMPROVEMENTS

CLIENT:

CITY OF CHARLESTON

LOCATION: ST. ANDREWS BLVD., CITY OF CHARLESTON, SC

DATE: MAY 1, 2013

JOB NUMBER: J - 23595.0001

SHEET: 19 of 19

SCALE: NTS

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